

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed December 5, 2007. Upon entry of this response, claims 1-2, 5-7, 10-15, 17-19, 22-26, and 28-39 are pending in the application. In this response, claims 1, 5, 6, 10-13, 18-19, 22-25, 29, 32-33, 35-36, and 38-39 have been amended, and no claims have been added or cancelled. Applicant respectfully requests that the amendments being filed herewith be entered and requests that there be reconsideration of all pending claims.

I. Examiner Interview Summary

An interview was conducted on January 30, 2008. Participants were Applicant's representative Cynthia L. Davis and Examiner Thuy Dao. During the interview, the participants discussed differences between the admitted prior art as shown in FIG. 3 of the application and Applicant's draft amendments to independent claims 1, 13, and 25. The Examiner recommended that Applicant draft further amendments directed to FIG. 4 of the application, in order to distinguish the claims over the admitted prior art in FIG. 3. The Examiner further suggested that the subject matter of claims 7, 19, and 30 be incorporated into the independent claims, as they are not present in either of the primary references (*Doyle* and *Volkov*). The Examiner indicated that these arguments and amendments would be carefully considered if presented in a response. Applicant wishes to thank the Examiner for his time.

II. Claim Objections

Claims 1, 5, 10, 12, 32-33, 35-36, and 38-39

Claims 1, 5, 10, 12, 32-33, 35-36, and 38-39 are objected to because of minor informalities. Specifically, the Office Action (p. 2) indicates that in claims 1, 5, 10, 12, and 32-33,

“all corresponding terms “grid node”, “distributed computing software application”, and “software application” should be changed to “grid node application”, as is recited in claim 1, line 2. Also, in claims 35-36, “distributed computing software application” should be changed to “software application” as is recited in claim 13. Lastly, that “distributed computing software application” in claims 38-39 should be changed to “software application” as is recited in claims 25.

In an effort to address the Examiner’s concerns and expedite prosecution, claims 1, 5, 10, 12, 32-33, 35-36, and 38-39 have been amended as suggested. Applicant respectfully submits that the objections to claims 1, 5, 10, 12, 32-33, 35-36, and 38-39 have been overcome and requests that the objections be withdrawn.

Claims 31-39

The Examiner requests on page 3 of the Office Action that Applicant point out the supporting text/figure for newly added claims 31-39. Claims 31-39 are supported by at least paragraphs 38-40, which are located on pages 7-8 of the specification.

III. Rejection of claims 13-15, 17, 19, 22-26, 28-30, and 34-39 under 35 U.S.C. § 101

Claims 13-15, 17, 19, 22-26, 28-30, and 34-39 have been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Office Action alleges on page 3 that “Data structures not claimed as embodied in computer readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760.” The Office Action recommends on page 4 that the independent claims be amended to recite “A system embodied in a computer readable storage medium”, as is recited in claim 1. Applicant has incorporated the Examiner’s suggestions into independent claims 13 and 25 in order to expedite prosecution and respectfully requests that the rejections of claims 13-15, 17, 19, 22-26, 28-30, and 34-39 be withdrawn.

IV. Rejection of Claims under 35 U.S.C. §103

Claims 1-2, 5-7, 10-15, 17-19, 22-26, and 28-39 have been rejected under §103(a) as being allegedly obvious over *Doyle* (U.S. Patent No. 6,009,455) in view of *Clinton* (U.S. Patent Pub. 2003/0236577) and further in view of *Stuefe* (U.S. Patent Pub. 2003/0200536). Claims 1, 13, and 25 have been rejected under §103(a) as allegedly obvious over *Volkov* (U.S. Patent No. 7,085,853) in view of *Logston* (U.S. Patent No. 6,687,735) and further in view of Admitted Prior Art ("APA"). Applicant respectfully submits that these rejections be reconsidered and withdrawn.

Claims 1-2, 5-7, 10-12, 31, 32, and 33

Independent claim 1 recites, as amended (emphasis added):

A computer readable storage medium having a program for automating a life cycle of a grid node application, where the grid node application utilizes a plurality of computing resources distributed over a network, the program:

creating a file describing a plurality of stages of the life cycle, wherein the stages comprise development, packaging, distribution, installation, execution, collection, and uninstall, wherein the distribution stage includes at least distributing the grid node application to at least one remote computing resource on the network;

creating a task list in the file which describes how at least one of the stages in the life cycle of the grid node application is to be performed; and
processing the task list by a process engine to perform at least one stage in the life cycle,

wherein the process engine is integrated with a development environment, where the development environment is used to develop the grid node application.

Applicant respectfully submits that the above emphasized claim features are not taught, disclosed, or suggested in *Doyle*. The Office Action alleges on page 5 that a task list is described in *Doyle*, column 8, lines 1-37. The cited section of *Doyle* states:

The job request means **1** presents to a user the spreadsheet submission form **43** shown in FIG. **6**. This presentation could be in a dialog box or other window on a personal computer. Upon completion of the form, the job request means sends a job request signal **40** comprising:

(a) A job request message **44**,

- (b) a job computation module name (in this case a spreadsheet interface program XLInterface),
- (c) an XSP file containing the contents of the form shown in FIG. 6,
- (d) the spreadsheet definition file, e.g., job.xls

In this example, the size algorithm **15** within XLInterface computes the number of segments by reading the XSP input file and forming the product of the number of specified values each parameter may take. Each parameter corresponds to one dimension of a n-dimensional matrix, where n is the number of parameters. The compute algorithm **25** calculates the parameters values by using the segment number as an index into an equivalent one-dimensional table containing every permutation of parameter values. The from segment **38** and to-segment **39** specified in the compute parameter list **31** in the command line define a unique subset of points in the parameter space. For each segment, the compute algorithm in the selected client calculates the corresponding parameters, inserts them into the appropriate cells in the spreadsheet, and calls a spreadsheet program to calculate the resulting value of target cell. The compute algorithm then reads the target cell value from the spreadsheet program and using the specification in the XSP input file, finds the minimum or maximum target cell value for the range of segments assigned to the segment group package. It creates an output file with the best target value and the parameter values associated with the best target value. While many means exist of invoking a spreadsheet program from another program, XLInterface uses Microsoft's OLE (Object Linking and Embedding) Automation technology to invoke the Excel spreadsheet program.

Even assuming, *arguendo*, that this section of *Doyle* is directed to a file containing a task list for a distributed computing application for calculating the values of various cells in a spreadsheet, there is no reference to a life cycle. *Doyle* further states in column 3, lines 43-57, "The master computer executes a master control program 10 that is independent and ignorant of any specific distributed application or calculation. The client computer 11 is a computer connected to a generic local or wide area network. On the client computer is a small application-independent client control program that executes when the client computer is not in normal use." In column 4, line 65-column 5, line 12, *Doyle* states that the parameters used by the job computation module are a module name, mode, an in-file list, which lists all necessary input files for execution of the algorithm, and an out-file list. Even assuming, *arguendo*, that *Doyle* discloses a distributed master-client system for execution of an algorithm, *Doyle* does not teach, disclose, or suggest a life cycle. Furthermore, nowhere in *Doyle* is there any teaching, disclosure, or suggestion of **creating a file describing a plurality of stages of the life cycle, wherein the stages comprise development, packaging, distribution, installation,**

execution, collection, and uninstall, wherein the distribution stage includes at least distributing the grid node application to at least one remote computing resource on the network and a task list in the file which describes how at least one of the stages in the life cycle of the grid node application is to be performed, as is recited in claim 1. *Clinton* and *Stuefe* do not remedy this deficiency in *Doyle*. Thus, claim 1 is considered allowable over any combination of *Doyle*, *Clinton* and *Stuefe*.

In an alternative rejection of claim 1, the Office Action further alleges on page 9 that *Volkov*, column 3, lines 40-55, also discloses a task list. The cited portion of *Volkov* appears to describe deployment of a shell client using an initialization file (column 4, lines 44-61). However, *Volkov* further states in column 6, lines 1-12:

In operation, the parser/interpreter 300 receives and processes commands and script files and converts them into the tree of commands, which will be executed using the shell clients,. The user can enter commands using a command line. In addition, the user can provide script files to the parser/interpreter 300. For example, the script file can include instructions on how to deploy the tasks to the various computer systems comprising the distributed computer system. Once commands are parsed and interpreted, the shell server 204 can utilize any of the functional units to facilitate performance of the command.

Even assuming, *arguendo*, that *Volkov* discloses a script file containing tasks for execution on a distributed computer system, there is no teaching, disclosure, or suggestion of **creating a file describing a plurality of stages of the life cycle, wherein the stages comprise development, packaging, distribution, installation, execution, collection, and uninstall, wherein the distribution stage includes at least distributing the grid node application to at least one remote computing resource on the network and a task list in the file which describes how at least one of the stages in the life cycle of the grid node application is to be performed**, as is recited in claim 1. *Logston* does not remedy this deficiency in *Doyle*. Further, even assuming, *arguendo*, that the Admitted Prior Art, as shown in FIG. 3 of the instant application, shows a life cycle of a grid node application, the Admitted Prior Art also does not teach, disclose, or suggest **creating a file describing a plurality of stages**

of the life cycle, wherein the stages comprise development, packaging, distribution, installation, execution, collection, and uninstall, wherein the distribution stage includes at least distributing the grid node application to at least one remote computing resource on the network and a task list in the file which describes how at least one of the stages in the life cycle of the grid node application is to be performed, as is recited in claim 1.

Therefore, claim 1 is considered allowable over any combination of *Volkov*, *Logston* and *APA*.

For at least the foregoing reasons, Applicant submits that claim 1 is allowable over the art of record and respectfully requests that the rejection of claim 1 be withdrawn.

Because independent claim 1 is allowable over the art of record, dependent claims 2, 5-7, 10-12, 31, 32, and 33 are allowable as a matter of law for at least the reason that the dependent claims contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Claims 13-15, 17-19, 22-24, 34, 35, and 36

Independent claim 13 is allowable for the same or similar reasons outlined above with regard to independent claim 1. Because independent claim 13 is allowable over the art of record, dependent claims 14-15, 17-19, 22-24, 34, 35, and 36 are allowable as a matter of law for at least the reason that the dependent claims contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Claims 25-25, 28-30, 37, 38, and 39

Independent claim 25 is allowable for the same or similar reasons outlined above with regard to independent claim 1. Because independent claim 25 is allowable over the art of record, dependent claims 25-25, 28-30, 37, 38, and 39 are allowable as a matter of law for at least the reason that the dependent claims contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

CONCLUSION

Applicant respectfully requests that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 1-2, 5-7, 10-15, 17-19, 22-26, and 28-39 be allowed to issue. Any statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. If the Examiner has any questions or comments regarding Applicant's response, the Examiner is encouraged to telephone Applicant's undersigned counsel.

Respectfully submitted,

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